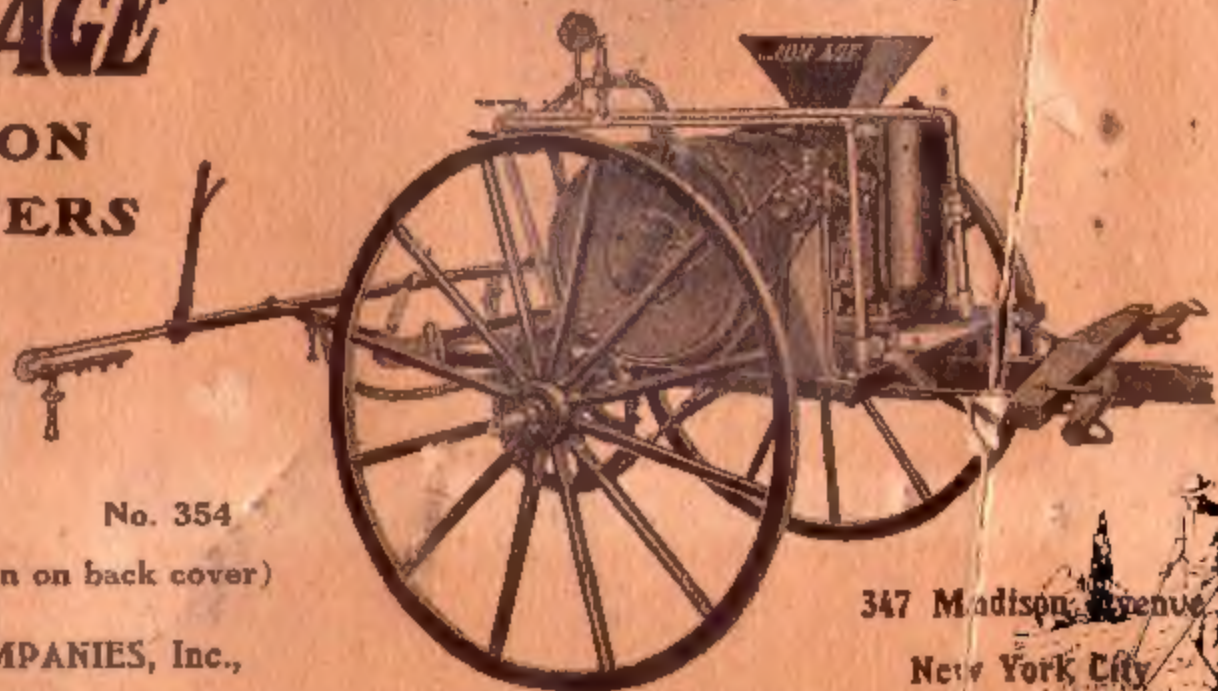


DIRECTIONS FOR SETTING UP AND OPERATING

Nos. 354, 354s, 355, 356, 357

**IRON AGE**

**TRACTION  
SPRAYERS**



No. 354

(No. 357 shown on back cover)

**BATEMAN & COMPANIES, Inc.,**

347 Madison Avenue

New York City





# DIRECTIONS FOR SETTING UP "IRON AGE" TRACTION SPRAYERS

**Examine Pictures—They will Help You**

R. H. refers to right hand side of machine and  
L. H. refers to left hand side of machine, facing in  
direction in which team travels.

The sprayer is shipped as follows:

1. Tank crated.
2. Pump crated, with relief valve, gauge, tool box and bag of small parts.
3. Frame with seat, seat iron, sprockets, drive chain, piping.
4. Thills.
5. Two wheels.
6. Pole.
7. Bundle consisting of evener and neckyoke.
8. Pole braces and bag of bolts for pole.

Note: Packages 6 and 7 are sent only with machines using pole; 4 is sent only with machines using thills.

## TO SET UP MACHINE

Uncrate pump and tank, cut all wires and lay out loose parts.

Bolt pole in position between center angle irons, leaving nuts loose. Bolt tool box on top of angles using the four-inch bolt passing through the rear of pole, having large washer under head of bolt inside of tool box. Remove nuts from front end of frame braces, secure rear end of pole braces with these bolts and secure front end to pole having head of bolt on top with washer between head of bolt and pole. After all bolts are in place draw all nuts tight.

(For attaching thills see directions below.)

Remove sand cap collars from axle, place large drive sprocket on axle on R. H. side of machine having numbers toward outside, making sure that

points of both set screws enter spots on axle and tighten securely. Place agitator sprocket on axle on L. H. side of machine and tighten set screw into spot. Replace sand caps.

Place wheels on axle with ratchet pocket out, slip on hubs and bolt to axle, locating in position for desired width of rows. (If wheels are set in narrowest position, sand cap collars on inside of wheels must be left off.)

Screw pipe with one-inch hose and stop cock into bottom of tank so that hose will project ahead when tank is on sprayer.

Place tank on frame with agitator shaft projecting toward L. H. and secure in position by bolts found in frame.

Place agitator sprocket on shaft with hub out so it lines up with sprocket on main drive shaft and secure in position with set screws.

Place pump shims S-289 in position on frame with lug projecting down over edge of angle and place pump on them, securing by bolts in pump base.

The pump intake pipe with ell and hose connection will be found in bag, screw this into ell in bottom of pump and swing to an angle of about 45 degrees. Place one-inch hose over hose connection and secure by hose clamp.

Place drive chains on sprockets with open side of link out and hook end projecting in direction in which chains will run.

Bolt chain tighteners on ratchets on tank heads and adjust so chains are moderately tight.

Connect discharge piping to pump as shown in cut. To do this it will be necessary to disconnect piping at unions and turn pipe in its fittings until it lines up, fold down pipe at rear so as to pass underneath center angles and secure by eye bolt passing between center angle irons with large washer on top, keeping center tee between angles. Secure piping to tank head by steel support using wood screws, then tighten bolt in support to hold pipe securely.



Turn pipe with relief valve and hose attached so it points toward nipple in top of tank, force hose over nipple and fasten with hose clamps. If necessary hose may be cut off to prevent bucking.

Turn ell with nipple on L. H. side of 4 way cock so it points slightly upward. Screw hose with short nipple into tee at left of relief valve and fasten other end with hose clamp to nipple at L. H. side of 4 way cock. Screw gauge into small upright pipe leading from discharge pipe, being sure joints are tight.

Bolt seat to seat irons. Bolt seat iron and seat iron helper to center angle irons, bolt passing between angles with steel clamp underneath.

Screw three-quarter-inch hose couplings with hose attached into rear run of discharge pipe.

Bolt S-290 with spray bar, hang iron on R. H. side of machine and S-291 on L. H. side, clamping at desired height by means of S-121.

Remove the two machine bolts from S-290 and S-291, place ends of wind shift quadrant on top of spray bar supports and replace bolts. The offset at ends of bar should be down. Stops S-122 should be on top of quadrant.

Bolt rear angle iron spray pipe carrier in place, the supports being on top of the leg in which there are two large square holes the other leg of the angle iron being toward the front of the machine and projecting down.

Place S-275A at center of spray bar support with lugs ahead and down, place S-274 in slot in S-275A and secure by bolt, having the flat part of steel keeper underneath quadrant and adjust so that bar will shift freely.

Remove bolt from lower end of shifter lever and slip lever over pipe, replace bolt and secure pipe to angle iron support by means of eye bolts and tighten up against "V" washers. To set levers on pipe so that machine sprays 28, 30, 33 and 36 inch rows on the regular four-row sprayer, or 34, 36,

39 and 42 inch on the "B" four-row, before tightening bolt which clamps S-270 to lever, place lever in notch furthest out and shift the pipe, keeping the lever stationary until the outside nozzle is eighteen inches from the center of the bar on the regular four-row and twenty-one inches on the four-row "B." Then clamp S-270 to lever and connect rear spray pipes by means of the hose already in place on the feed pipe.

Place evener hasp, evener and neckyoke on pole.

Place oil can holder on top of center angle irons just back of front cross bar and secure by wood screws passing between center angles into pole underneath.

Screw bent vent pipe into casting on top of man hole cover.

Place nozzles and strainers in position on rear bar.

### TO ATTACH THILLS

Loosen bolt which holds knee piece at rear of thills and swing knee pieces up. Place thills in position under front of frame with knee pieces toward outside and bevel washer S-523 between thills and front angle iron, fastening with bolt which passes through frame and frame braces.

Knee piece at rear of thills is fastened to frame by same bolt as front support for tank.

Place cross bar on thills with single tree on top, and attach steel braces. Leave nuts loose until all pieces are in place, then tighten securely. Oil can holder is fastened to rear of thill with wood screw.

### SIX-ROW SPRAYERS Nos. 356 and 357

The six-row sprayers are set up in the same manner as the four-row.

The spray bar is sent assembled and attached to machine in the same way as the four-row bar.

After attaching to machine see that outside shifting angle irons have not become jarred out of place in shipping. They should hang parallel with the pipe. See that all sliding parts are well lubricated.



To adjust bar for different width of rows set the adjusting lever in the notch which brings nozzles over the center of rows nearest the center of machine, then loosen bolt which holds toothed rack to angle iron and swing rack out of engagement with small gear. Now, keeping adjusting lever stationary, slide toothed angle iron having nozzle at outer end until nozzle is in position to fit third row from center of machine, replace toothed rack and secure by bolt.

#### **DIRECTIONS FOR OPERATING**

The regular sprayers will spray rows 28, 30, 33 and 36 inches apart and the four-row "B" will spray rows 34, 36, 39 and 42 inches apart.

The wheels can be adjusted on the regular sprayers so that the distances from center to center of wheels are five feet, five feet five inches and five feet nine inches, as desired.

Seat may be adjusted forward or backward depending on weight of operator.

After the relief valve has once been set to the desired pressure, do not readjust it if pressure falls, as this is caused by sediment or other foreign matter lodging on the seat of the valve. This trouble may be remedied by cleaning valve.

The spray pipes may be adjusted up or down by means of the serrated faces on castings S-290 and S-291 and the serrated washer S-121. The wind shift stops S-122 may be shifted wherever desired by removing the cotters.

In cold weather drain the tank, pump and piping thoroughly. Remove plugs from casting on bottom of tank and from bottom of tee under tank, then with nozzles open work the pump by hand until all solution has been cleaned from the piping. Then remove plugs from discharge piping at front of sprayer, open drip cocks in the pump cylinder and drain the pump, the pump being kept running all the while by hand.

Keep axle and all other moving parts well lubricated.

#### **DIRECTIONS FOR OPERATING**

##### **PRESSURE RETAINER AND PUMP RELIEF**

When spraying, the handle of the 4 way cock should point directly toward rear of machine. This allows solution to pass straight through to nozzles.

When turning at end of row or when stopping horses, turn handle so it points toward wheel, shuts off the nozzles and locks the pressure in the air chamber, at the same time opening up a free passage for the solution back into the tank, thus relieving the pump from work.

When it is desired to use the sprayer for orchard work or in any case when the pump is operated by the hand lever, turn the stop cock lever at an angle of 45 degrees, that is half way between the other positions, which will shut off the nozzles and also the passage into the tank.

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No. 357 6 ROW TRACTION SPRAYER

